

REMARKS

Claims 1 to 6, 10 and 11 are present for purposes of prosecution.

Claims 7 to 9 have been withdrawn as being directed to a non-elected invention.

Claim Objections

Claim 10 is objected to for being a substantial duplicate of Claim 1.

Claim 10 directed to a pharmaceutical composition has been amended to include “a pharmaceutically acceptable carrier”. Basis for this amendment is found in the specification at page 10, lines 5 to 8.

Claim Rejections - 35 U.S.C. §112

Claims 3 and 4 are rejected under 35 U.S.C. §112, second paragraph. The Examiner indicates that in Claims 3 and 4, an “and” should be added before the last compound listed.

Claims 3 and 4 have been amended to include an “and” before the last compound listed.

In view of the foregoing, it is believed that all formal objections have been overcome.

Claim Rejections - 35 U.S.C. §103

Claims 1, 5, 6, 10 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. (U.S. Patent No. 6,673,821).

The Examiner contends that:

“Applicants claim thiazolidine compounds. Wang et al. teach thiazolidine compounds that are structurally similar to the instant claimed compounds (column 2-3 and 17-22; and especially compound EP-001171 in Table 1 in columns 15-16).

***Ascertainment of the difference between the prior art and the claims
(MPEP §2141.02)***

The difference between the compounds of the prior art and the compounds instantly claimed is that of homology (see R² definition in Wang et al. - C₁ hydrocarbon).

***Finding of prima facie obviousness--rational and motivation
(MPEP §2142-2143)***

To those skilled in chemical art, one homologue is not such an advance over adjacent member of series as requires invention because chemists knowing properties of one member of series would in general know what to expect in adjacent members. In re Henze, 85 USPQ 261 (1950).

One skilled in the art would thus be motivated to prepare homologs of the compounds taught by the prior art to arrive at the instant claimed products with the expectation of obtaining additional beneficial products which would be useful as an aspartyl protease inhibitor. The instant claimed invention would have been suggested and therefore, obvious to one skilled in the art. A strong case of *prima facie* obviousness has been established."

Allowable Subject Matter

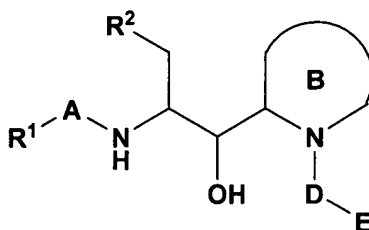
The Examiner indicates that:

"The elected species of Example 1, found on page 54 of the instant specification, is allowable over the art of record."

The Examiner further indicates that:

"Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims."

U.S. Patent No. 6,673,821 to Wang et al. discloses compounds having the structure

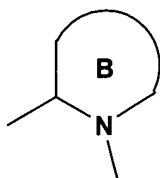
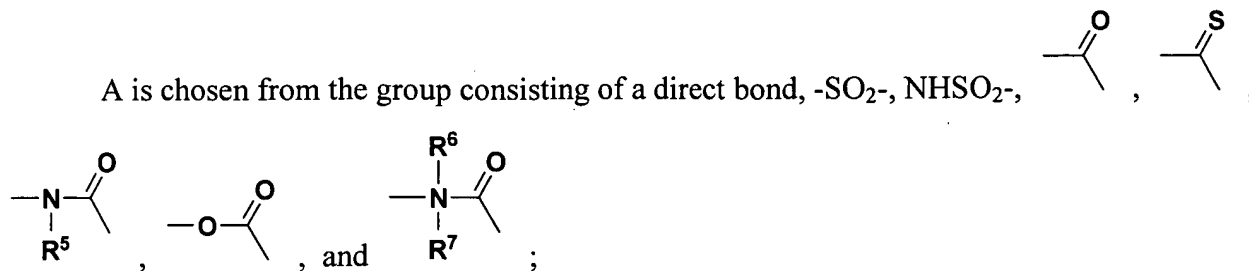


wherein

R¹ is chosen from the group consisting of C₁-C₂₀ alkyl, aryl, alkylaryl, substituted alkylaryl, C₁-C₁₀ alkoxy, C₃-C₁₀ oxaalkyl, aryloxy, substituted aryl, substituted aryloxy, heterocyclyl and heterocyclyloxy;

R² is chosen from the group consisting of C₁-C₁₀ hydrocarbon, substituted aryl and heterocyclyl;

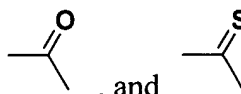
A is chosen from the group consisting of a direct bond, $-\text{SO}_2-$, NHSO_2- ,



is a monocyclic, bicyclic or tricyclic nitrogen heterocycle containing from 0 to 3 substituents chosen from lower alkyl, lower alkoxy, lower alkylthio, hydroxyl, mercapto, cyano, carboxy, lower alkoxy carbonyl, lower alkylaminocarbonyl, amino, lower alkylamino, di(lower alkyl)amino, nitro, halo and haloalkyl;

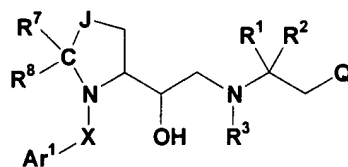
R^5 , R^6 and R^7 are chosen independently from the group consisting of hydrogen and lower alkyl;

D is chosen from the group consisting of $-\text{SO}_2-$,



E is chosen from the group consisting of C_1 - C_{10} hydrocarbon, substituted aryl, heterocyclyl and substituted heterocyclyl.

Applicants' compounds as claimed have the formula



I.

Please note that the Wang et al. moiety includes the substituent



where R^2 can be a C_1 - C_{10} hydrocarbon which can be alkyl.

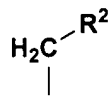
Thus, the $\begin{array}{c} R^2 \\ | \\ \text{---} \end{array}$ group can be CH_3CH_2 -.

However, Applicants' compounds do not include a carbon containing substituent (C_2H_5)

corresponding to the Wang et al. $\begin{array}{c} R^2 \\ | \\ \text{---} \end{array}$ group. Thus, the Wang et al. group is a 2-carbon substituent different from Applicants' compounds and does not differ by a CH_2 group. Accordingly, Wang et al. is not a homologue of the compounds as claimed herein.

As indicated in Hackh's Chemical Dictionary 4th Ed. 1969, p. 326 and Hawley's Condensed Chemical Dictionary, 11th Ed. 1987, p. 607, the prefix "homo-" usually designates "a homolog of a compound, differing in formula from the latter by an increase of CH_2 " (Hawley's Condensed Chemical Dictionary, supra, p. 607). The above definition of a homologue is further buttressed by In re Coes, Jr. (CCPA 1949) 173 F.2d 1012, 81 USPQ 369, which defines a homologous series as a family of chemically related compounds which varies from member to member by CH_2 .

It is mentioned that Applicants' compounds as claimed is patentable over Wang et al. There is no disclosure or suggestion in Wang et al. of compounds which do not include the substituent



where R^2 can be CH_3 or higher alkyl or aryl or heterocyclyl. Applicants' compounds do

not include any substituent on the C atom which bridges $\begin{array}{c} \text{---CH---} \\ | \\ OH \end{array}$ and $\begin{array}{c} \text{---N---} \\ | \end{array}$. Accordingly, for this reason, it is submitted that Applicants' compounds as claimed are not obvious from and are patentable over Wang et al.

Although it is believed that for the above reasons, Applicants' compounds as claimed are patentable over Wang et al. in order to expedite prosecution herein, Applicants will submit a Declaration of Timur Gungor and John Dickson, inventors of the subject matter claimed in the subject application, of prior invention to overcome Wang et al. U.S. Patent No. 6,673,821 which issued on January 6, 2004 is based on U.S. Application Serial No. 10/007,341 filed October 22, 2001.

Applicants will also submit a Declaration of Ying Chen who carried out instructions of Timur Gungor in preparing compounds as claimed herein. Submission of the Gungor-Dickson and

Chen Declarations may be delayed inasmuch as John Dickson and Ying Chen are no longer employed at Bristol-Myers Squibb Company. Accordingly, it may be 1-2 months or later before Applicants will be able to obtain signed declarations.

Also to be submitted is a Declaration of Hao Zhang wherein she declares that she signed Ying Chen's notebook pages as a witness.

In addition, to be submitted is a Declaration of Ramakrishna Seethala who supervised the testing of compounds prepared by Ying Chen under Timur Gungor's supervision. The actual testing was carried out by Zheng Ping Ma under Dr. Seethala's supervision, a Declaration of Zheng Ping Ma will also be submitted. Signed declarations will be forwarded to the Patent Office as soon as all become available.

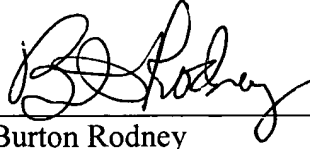
The declarations to be submitted will establish reduction to practice of the invention claimed in the present application at a date prior to October 22, 2001, that is, the earliest effective date of Wang et al. as a reference, thereby removing Wang et al. as a reference.

In view of the declarations to be submitted, it will be seen that Wang et al. should no longer be considered as a reference against the subject application and that the rejection based thereon should be withdrawn.

In view of the foregoing, it is believed that Claims 1 to 6, 10 and 11 overcome all formal objections and are patentable over the cited Wang et al. patent even without the declarations to be submitted.

Respectfully submitted,

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